

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HEADWATER RESEARCH LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. and
SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants.

Case No. 2:23-cv-00641-JRG-RSP

JURY TRIAL DEMANDED

**PLAINTIFF HEADWATER RESEARCH LLC'S
OPENING CLAIM CONSTRUCTION BRIEF**

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**TABLE OF EXHIBITS
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Ex.	Description	Abbreviation
1	U.S. Patent 9,647,918	'918 patent
2	Joint Claim Construction and Prehearing Statement, Dkt. 57 (Jan. 10, 2025)	JCCS
3	Ex. A to Joint Claim Construction and Prehearing Statement, Dkt. 57-1 (Jan. 10, 2025)	JCCS Ex. A
4	Samsung's Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,647,918, Paper 2, IPR2024-01396 (Sept. 9, 2024)	'918 IPR Pet. 1
5	Declaration of Dr. Traynor in Support of Samsung's Petition for <i>Inter Partes</i> Review in IPR2024-01396 (Sept. 9, 2024)	Traynor Decl. 1
6	Samsung's Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,647,918, Paper 2, IPR2024-01397 (Sept. 9, 2024)	'918 IPR Pet. 2
7	Declaration of Dr. Traynor in Support of Samsung's Petition for <i>Inter Partes</i> Review in IPR2024-01397 (Sept. 9, 2024)	Traynor Decl. 2
	Plaintiff Headwater Research LLC	Headwater
	Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.	Samsung
	<i>Inter Partes</i> Review	IPR
	Person of Ordinary Skill in the Art	POSITA

I. INTRODUCTION

The parties' claim construction disputes have narrowed to a single term and issue: whether "the calling device application" in claims 1 and 14 of the '918 patent is indefinite. The term is not indefinite. In the meet and confers leading to claim construction, Samsung's only basis for indefiniteness was that the term "lacks antecedent basis." Samsung is wrong. The term has antecedent basis and is not indefinite for three overarching reasons.

First, the claim language and specification are dispositive. They make clear that the recited "the calling device application" refers to "each of the plurality of device applications" recited earlier in the claim. No other "device application" is mentioned or suggested. *Second*, Samsung has no evidence to prove indefiniteness. It didn't submit an expert declaration and fails to identify any intrinsic or extrinsic evidence in the JCCS (only listing claims 1 and 14 themselves). *Third*, Samsung's own IPRs on the '918 patent undermine any notion of indefiniteness. In those IPRs, Samsung had no problem understanding "the calling device application" and agreed that the term refers to each of the earlier-recited "plurality of device applications."

II. BACKGROUND

A. Asserted Patents

The asserted patents in this case are U.S. Patent Nos. 9,179,359 ("359 patent"); 8,639,811 ("811 patent"); 8,588,110 ("110 patent"), and 9,647,918 ("918 patent"). On February 8, 2025, pursuant to the DCO, Headwater elected the following asserted claims:

- '359 patent — claim 26
- '811 patent — claim 4
- '110 patent — claims 1, 4, 5, 6, 14, 21, 25, 27, 28, 30
- '918 patent — claims 1, 2, 9, 10, 11, 12, 13, 14, 15, 19

Although the parties identified several terms in the JCCS, only one disputed term remains. That term is “the calling device application” in claims 1 and 14 of the ’918 patent.

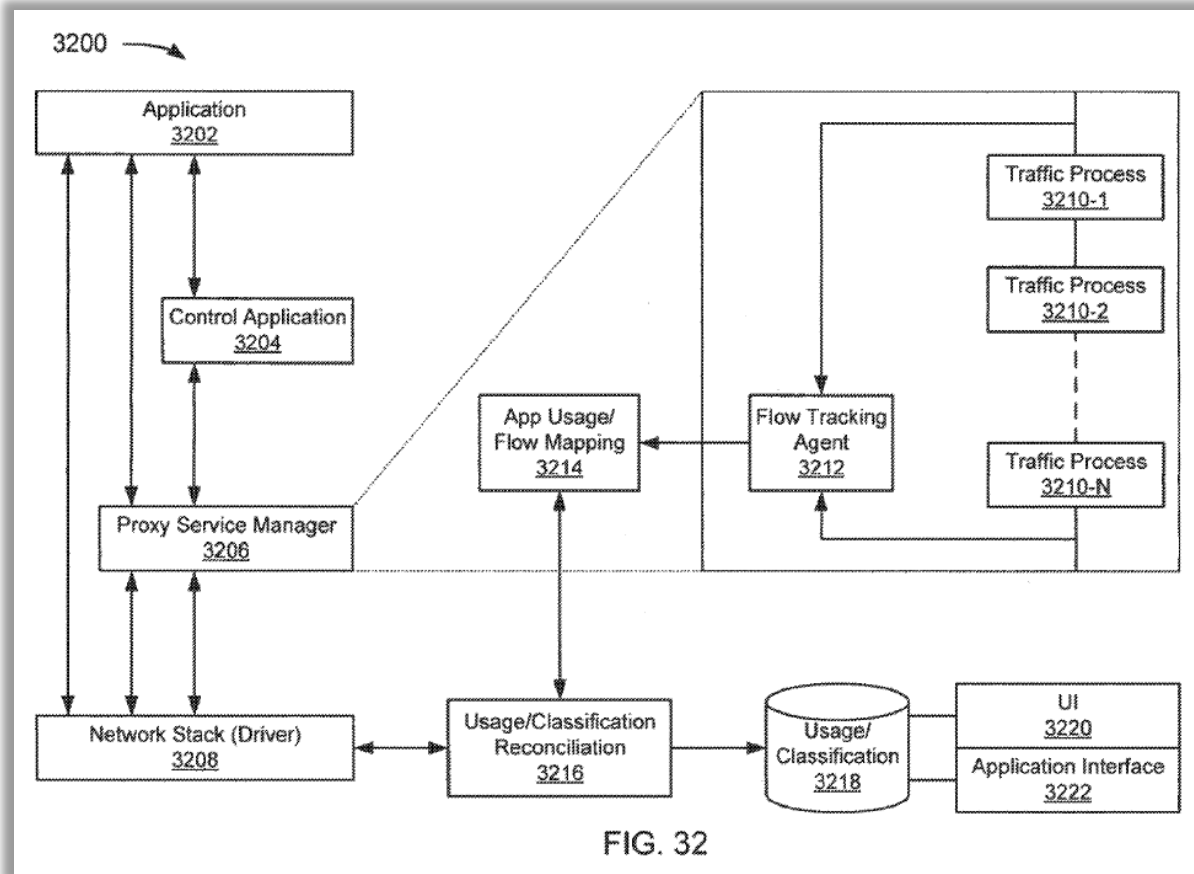
B. Overview of ’918 Patent

The ’918 patent is entitled “Mobile device and method attributing media services network usage to requesting application.” ’918 patent at (54). It claims priority to a series of applications, including provisional application 61/435,564 filed on January 24, 2011. *Id.* at (60). At a high level, the ’918 patent describes (*id.* at Abstract):

A wireless end-user device has a wireless modem, a network stack configurable to receive and transmit data via the modem and a wireless network, and two Application Programming Interfaces (APIs) available to device applications. The first API allows applications to open and use data flows via the network stack. The second API allows applications to make data transfer requests for media objects associated with network resource identifiers. The second API prompts a media service manager to manage network data transfers for the media object via the network stack. A service classification agent associates wireless network data usage for the media object network data transfers with the device application making the request.

Thus, the ’918 patent is generally directed to a wireless end-user device that allows applications to request data transfers over a network stack either directly via a first call to a network stack application programming interface (API), or indirectly via a second API call to a proxy media service manager. The service manager acts as a proxy to interface for the network stack in lieu of the application. Regardless of whether the application (1) transfers data via a first API call to the network stack or (2) transfers data by proxy via a second API call to the proxy media service manager, the claimed device can associate data transfers with the requesting device application. This allows the device to track an application’s aggregate data usage for both types of calls (via the first or second APIs) attributable to the application.

An example of the ’918 patent “dual-path approach” is shown in Figure 32:



In this figure, Application 3202 can directly interface with Network Stack 3208 via the left-most vertical arrow and can also indirectly interface with Network Stack 3208 via Proxy Service Manager 3206. The patent explains that when Application 3202 calls the network stack API via the left-most arrow, “data at the socket will accurately identify the app as the initiator of the data flow” because the application issued a call to the network stack API to open the socket and to initiate the data flow. ’918 patent at 116:66-117:3. But when “the application uses the proxy service manager 3206” rather than calling the network stack API, “data at the socket will be insufficient to identify the application 3202 as the initiator of the data flow.” *Id.* at 117:3-6.

To solve the socket-level data being insufficient to identify the Application 3202 as the initiator of the data flow, the ’918 patent recognizes the advantage of “add[ing] a virtual tag at the proxy API.” *Id.* at 117:12-20. The virtual tag is “sent from the flow tracking agent 3212” (which

is depicted as being part of the proxy service manager) “to the app usage/flow mapping engine 3214, which communicates with the usage/classification reconciliation 3216, which in turn communicates with the network stack (driver) 3208.” *Id.*

Claim 1 of the '918 patent is representative for purposes of claim construction. It recites:

Identifier	Claim Language
[1.pre]	A wireless end-user device, comprising:
[1.1]	a wireless modem configurable to connect to a wireless network;
[1.2]	a network stack configurable to receive and transmit data via the wireless modem and the wireless network;
[1.3]	a first network stack Application Programming Interface (API), containing at least one first call accessible to each of a plurality of device applications, the first network stack API callable by each of the plurality of device applications to open and use data packet flows via the network stack, the wireless modem, and the at least one wireless network;
[1.4]	a second API containing at least one second call accessible to each of the plurality of device applications, the second API callable by each of the plurality of device applications to make a data transfer request for a media object associated with a network resource identifier supplied by the calling device application;
[1.5]	a media service manager prompted by the second call, to manage network data transfers for the media object by interfacing with the network stack to retrieve the media object associated with the network resource identifier via the wireless modem and the wireless network; and
[1.6]	one or more service classification and measurement agents to associate wireless network data usage for the media object network data transfers with the device application that requests the data transfer for the media object, to associate wireless network data usage for respective data packet flows opened and used via the first network stack API with the device application opening such respective data packet flow, and to reconcile wireless network data usage for each of the plurality of device applications to track an aggregate wireless network data usage attributable to each of the plurality of device applications via both the first network stack API and the second API.

C. Level of Ordinary Skill

In Samsung’s two IPRs on the ’918 patent, it proposed that a POSITA in the field of the ’918 patent “would have had (1) at least a bachelor’s degree in computer science, computer engineering, electrical engineering, or a related field, and (2) at least two years of industry experience in wireless communication network applications and software. Additional graduate education could substitute for professional experience, and vice versa.” ’918 IPR Pet. 1 at 2 (citing Traynor Decl. 1 ¶¶ 21-22); ’918 IPR Pet. 2 at 2-3 (citing Traynor Decl. 2 ¶¶ 21-22).

Headwater did not dispute this proposed level of ordinary skill in its IPR preliminary responses. Headwater also does not dispute it for purposes of claim construction.

III. THE SOLE DISPUTED TERM IS NOT INDEFINITE

A. “the calling device application” (’918 patent, claims 1 & 14)

Headwater’s Proposed Construction	Samsung’s Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

The sole disputed term is “the calling device application” in claims 1 and 14 of the ’918 patent. The term is not indefinite. In the meet and confers before claim construction, Samsung’s only basis for indefiniteness was that the term “lacks antecedent basis.” Samsung is wrong. The term has antecedent basis and is not indefinite for three overarching reasons.

First, the claim language and specification are dispositive. They make clear that the recited “the calling device application” refers to “each of the plurality of device applications” recited earlier in the claim. No other “device application” is mentioned or suggested. *Second*, Samsung has no evidence to prove indefiniteness. It didn’t submit an expert declaration and fails to identify any intrinsic or extrinsic evidence in the JCCS (only listing claims 1 and 14 themselves). *Third*, Samsung’s own IPRs on the ’918 patent undermine any notion of indefiniteness. In those IPRs,

Samsung had no problem understanding “the calling device application” and agreed that the term refers to each of the earlier-recited “plurality of device applications.”

1. The ’918 claims and specification make clear that “the calling device application” refers to “each of the plurality of device applications” recited earlier in the claims.

Claim 1 of the ’918 patent is representative and recites, in part:

Identifier	Claim Language
[1.3]	a first network stack Application Programming Interface (API), containing at least one first call accessible to <i>each of a plurality of device applications</i> , the first network stack API callable by each of the plurality of device applications to open and use data packet flows via the network stack, the wireless modem, and the at least one wireless network;
[1.4]	a second API containing at least one second call accessible to <i>each of the plurality of device applications</i> , the second API callable by <i>each of the plurality of device applications</i> to make a data transfer request for a media object associated with a network resource identifier supplied by <i>the calling device application</i> ;

This claim language is perfectly clear. Claim [1.3] introduces the term “a plurality of device applications.” It describes a first network stack API that is “callable by” each of *a* plurality of device applications. Claim [1.4] describes a second API. It says that the second API is “callable by” each of ***the*** plurality of device applications. Claims [1.3] and [1.4] describe the *same* plurality of device applications: e.g., App1, App2, App3. Under the claim language, each application within the plurality (e.g., each of App1, App2, App3) can make two calls. Each can call the first API (as described in claim [1.3]) and can call the second API (as described in claim [1.4]).

Claim [1.4] further describes the call to the second API. It says that the call is “to make a data transfer request for a media object associated with *a network resource identifier supplied by the calling device application*.” This describes a network resource identifier and says the identifier is “supplied by” the specific device application that is making the call to the second API.

Accordingly, “the calling device application” simply refers to *each* of the “plurality of device applications” recited throughout claims [1.3] and [1.4]. When App1 calls the second API, the network resource identifier is supplied by App1; when App2 calls the second API, the identifier is supplied by App2, etc. There is nothing ambiguous about the claim language. Nor is there any plausible argument that “the calling device application” could refer to some other or unknown application. A POSITA would readily understand that “the calling device application” is each of the plurality of device applications that call the second API.

Indeed, claim [1.4] expressly says that the second API is “callable by” each of the plurality of device applications.” Thus, it makes perfect sense to refer to each application as “the calling device application.” The language of “callable by” and “calling” is part of the same clause, not separated by a comma. No English speaker, much less a POSITA, would be confused by this. The term has antecedent basis and is not indefinite.

Further still, the remaining claim language also shows that “the calling device application” is not indefinite. For example, claim [1.6] recites:

Identifier	Claim Language
[1.6]	one or more service classification and measurement agents <i>to associate wireless network data usage for the media object network data transfers with the device application that requests the data transfer for the media object</i> , to associate wireless network data usage for respective data packet flows opened and used via the first network stack API with the device application opening such respective data packet flow, and <i>to reconcile wireless network data usage for each of the plurality of device applications to track an aggregate wireless network data usage attributable to each of the plurality of device applications via both the first network stack API and the second API</i> .

The first part of claim [1.6] describes associating “wireless network data usage for the media object network data transfers with *the device application that requests the data transfer for the media object*.” This refers to “the calling application” recited in claim [1.4]. That is the specific

application that calls the second API and requests a data transfer for the media object. *See* claim [1.4] (reciting “to make a data transfer request for a media object”); claim [1.6] (reciting “the device application that requests the data transfer for the media object”).

Further, “a network resource identifier is provided by” each device application that calls the second API to make a data transfer request. That is how, as described in claim [1.6], the system tracks wireless network data usage “attributable to *each of the plurality of device applications.*”

The claim language is clear and alone dispositive of Samsung’s indefiniteness argument. But the ’918 specification also confirms the term is not indefinite. For example, the specification discusses identifying an application “that requests from a media service manager a data transfer (data transfer request) that includes a network resource identifier . . . that identifies a source (or a proxy to the source) of the data to be transferred or a data object to be transferred.” *See* ’918 patent at 114:11-49. Because the request is from an application and includes a network resource identifier, the data transfer can be attributed to the specific application. *See id.* (“In some embodiments, a software agent (e.g., a service classification and accounting agent) *identifies the originating application.* In some embodiments, the software agent monitors and stores the application name, identifier, process, etc., for each application that requests a data transfer from the media service manager or that conducts a data transfer with the media service manager.”).

As another example, and as discussed above, Fig. 32 shows Application 3202 and discusses the problem of “accurately identify[ing] the app as the initiator of the data flow.” *Id.* at 116:66-117:3. The patent recognizes that socket-level data may be insufficient and discusses “add[ing] a virtual tag at the proxy API.” *Id.* at 117:12-20. The virtual tag is “sent from the flow tracking agent 3212” (which is depicted as being part of the proxy service manager) “to the app usage/flow mapping engine 3214, which communicates with the usage/classification reconciliation 3216,

which in turn communicates with the network stack (driver) 3208.” *Id.* The virtual tag is supplied by an application and allows the system to accurately attribute data flow to the application.

2. Samsung offers no evidence—intrinsic or extrinsic—to meet its burden to prove indefiniteness.

Samsung bears the burden to prove indefiniteness by clear and convincing evidence. But no evidence has been offered. Samsung didn’t submit an expert declaration on claim construction. And it failed to identify any relevant intrinsic or extrinsic evidence, as shown by Samsung’s portion of the JCCS chart for this term (JCCS, Ex. A at 6):

Samsung’s Proposed Construction and Supporting Evidence
Indefinite <i>Supporting Evidence:</i> <u>Intrinsic Evidence</u> '918 patent at 124:28-63; 126:32-64; claims 1, 14.

Samsung only lists claims 1 and 14 themselves (since the citations to 124:28-63 and 126:32-64 are where claims 1 and 14 appear). It doesn’t identify any portion of the ’918 patent specification or prosecution history that allegedly support indefiniteness. Because they do not. Samsung’s showing is insufficient, and it cannot prove indefiniteness by clear and convincing evidence.

3. Samsung’s two IPRs on the ’918 patent confirm that “the calling device application” is easily understood and not indefinite.

Samsung’s indefiniteness assertion is also undermined by its representations to the PTO. Samsung filed two IPR petitions and two expert declarations challenging claims 1 and 14 of the ’918 patent. In those petitions/declarations, Samsung and its expert Dr. Traynor never suggested that the term “the calling device application” might be ambiguous or lack antecedent basis. *See*

'918 IPR Pet. 1 at 38-41; *see also* Traynor Decl. 1; '918 IPR Pet. 2; Traynor Decl. 2. Samsung and its expert expressly said that no claim constructions were necessary. '918 IPR Pet. at 1. And they had no problem understanding the term (without suggesting or trying to address any alternative meanings) and allegedly mapping it to the prior art.

Indeed, Samsung and its expert's entire discussion of claim [1.4] and the limitation "a network identifier supplied by the calling device application" supports Headwater's understanding of "the calling device application" above. *See* '918 IPR Pet. 1 at 38-41. The calling device application is simply each of the plurality of device applications that call the second API (as set forth in claims [1.3] and [1.4] and meet the requirements therein). That is how Samsung's IPR understand the term and how it attempts to apply it to the prior art.

For example, Samsung provides the following annotation as allegedly showing "network resource identifiers" supplied by "the calling application" (*id.* at 40):

"network resource identifiers" supplied by the calling application via the CALL request

TABLE 1-continued

MESSAGE	USE	SYNTAX	PARAMETERS	PARAMETER DESCRIPTION
Notify Response	Sent by IMS application to UA to acknowledge notify request	notify status_message	status_message	Indicates receipt of notify request, e.g. "OK"
Publish Request	Sent by IMS application to IMS UA to publish change in the user's presence status	publish uri expire_time [autorefresh]	uri expiretime autorefresh	Address. Time before the publish expires in seconds. Optional flag instructing the UA to refresh the publish automatically when it expires. If the application does not want the UA to automatically refresh the publish, the flag is omitted.
Publish Response	Sent by IMS UA to IMS application responsive to Publish request	publish uri expiretime status_message[status_code]	uri expiretime status_message status_code	Address. Sometimes, the server ignores the requested expire time and sets it to another value. This parameter returns the expiretime selected by the server. Status of request indicating success (e.g. "OK") or failure (e.g., "Failed"). Optional code indicating status of publish request, 200 if the request was successful or a failure code on failure.
Call Request	Sent between IMS application and IMS UA to initiate MSRP and RTP sessions	call userid [userid@remotehost[:port]] call_type1...call_typeN	userid host:port call_type	At the originating endpoint, the IMS application specifies a userid to call when sending Call request if registered with a proxy. At the terminating endpoint the UA specifies the userid of the calling party. At the originating endpoint, the UA specifies the host address and port to call, if not registered with a proxy. At the terminating endpoint the UA specifies the userid of the network address and port designated by the calling party for the call. Type of call to be established, for example audio/amr or video/h263. Multiple call_types may be listed, e.g., audio/amr and video/h263 for video telephony

SAMSUNG-1041, Table-1.

As another example, Samsung provides the following annotation and argues an MA API request includes the network resource identifier “supplied by the calling application” (*id.* at 41)

Attorney Docket No. 39843-0182IP1
IPR of U.S. Patent No. 9,647,918

The OPEN request of the MA API includes the “*network resource identifier*” supplied by the calling application

TABLE 3

MA API				
MESSAGE	USE	SYNTAX	PARAMETERS	PARAMETER DESCRIPTION
Listen Request	Sent by UA to MA to initiate a MSRP session. The MA opens a TCP listener in response to the Listen request.	listen [remotehost]	remotehost	Optional parameter specifies address from which connections can be made.
Listen Response	Sent by MA to UA as final response to Listen request. The Listen response includes the address and port of the TCP connection opened for the MSRP session.	listen status_message[status_code] host:port	status_message status_code host:port	Status of listen request indicating success (e.g. “OK”) or failure (e.g., “Failed”) Optional code indicating status of Listen request, 200 if the request was successful or an error code on failure. Network address of host and port number for port opened in response to Listen Request. Returned when Listen request is successful. Omitted when Listen request fails.
Open Request	Sent by UA to MA to initiate RTP session. The MA opens a TCP connection in response to the Open request.	open [remotehost]	remotehost	Optional address specifies address from which connections can be made.

SAMSUNG-1041, Table-3.

Samsung’s IPR invalidity arguments are wrong for the reasons set forth in Headwater’s patent owner preliminary response. But on the specific issue of *what* “the calling device application” is, the parties seem to agree. The calling application is *each* of the plurality of applications that was previously recited in claims [1.3] and [1.4].

IV. CONCLUSION

For the foregoing reasons, the Court should find that the term “the calling device application” in claims 1 and 14 of the ’918 patent is not indefinite.

Dated: February 21, 2025

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**ATTORNEYS FOR PLAINTIFF,
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CERTIFICATE OF SERVICE

I hereby certify that on February 21, 2025, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF System per Local Rule CV-5(a)(3).

/s/ Marc Fenster
Marc Fenster